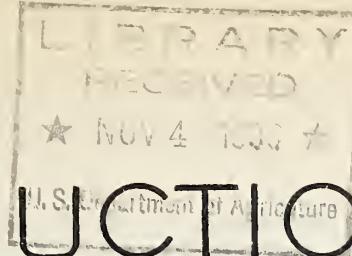


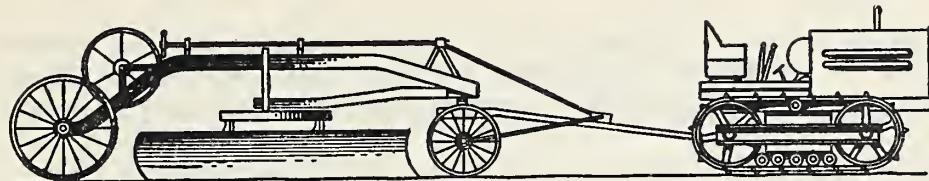
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Do not assume content reflects current scientific knowledge, policies, or practices.





# CONSTRUCTION



## HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE  
WASHINGTON, D.C.

Volume 5.

October, 1939

No. 8.

What becomes of the hydraulic pumps on discarded dump trucks? On pages 2 & 3 is shown a use Region 8 is making of them.

Camp Evelyn, F-60, Upper Michigan National Forest has furnished complete details of a tow-bar used for ready removal of trucks from garages in case of emergency and details of a desirable arrangement and construction of tool boxes and seats for trucks transporting enrollees and tools. These details appear on pages 4, 5 and 6.

Oiled cables are seldom used in FS work but the method of lubricating wire rope, submitted by Region 6, and shown on page 7, should be found very useful when cables are to be stored for a considerable length of time.

On page 8 will be found a description of and sketches for a proposed new wire reel which were submitted by Camp Hutchins Creek F-8, Wolf Lake, Illinois, Shawnee Purchase Unit - now a part of the Shawnee National Forest.

E. S. Massie, Jr.,  
Editor.

## Conversion of Dump Truck Hydraulic Pump to Hydraulic Grader Operation

Region 8 has developed in its central repair shop at Forest, Mississippi, a method of converting salvaged hydraulic pumps from dump trucks, to the operation of hydraulically controlled graders.

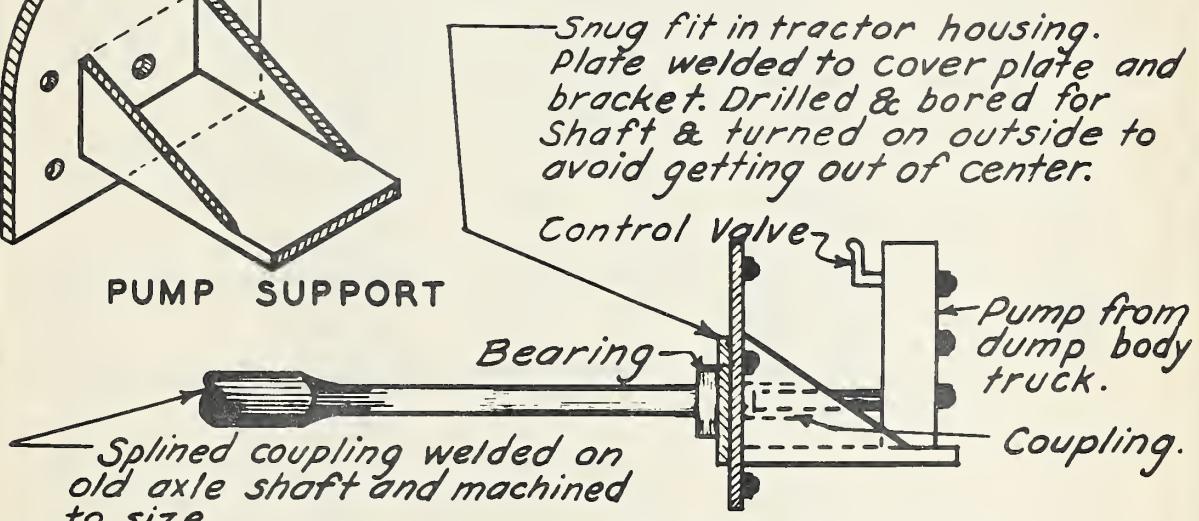
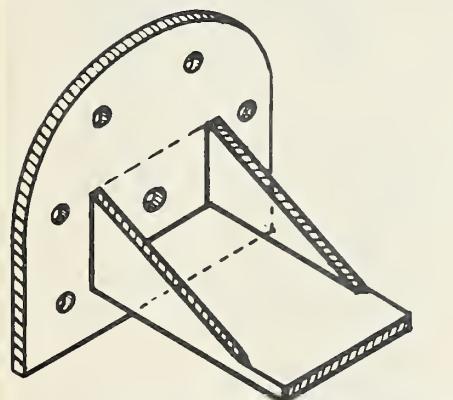
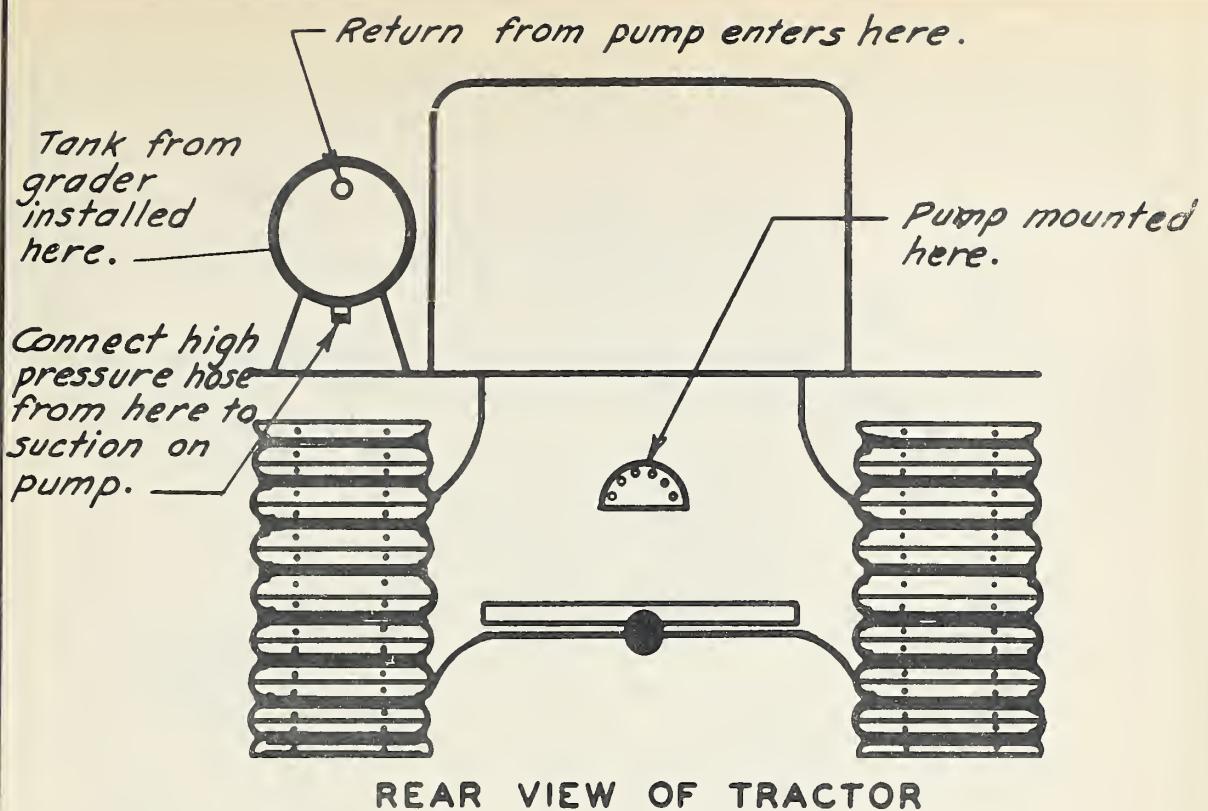
The pump is mounted on a tractor, as illustrated in the sketch on the opposite page, and takes the place of the gasoline engine and pump with which hydraulically controlled graders are normally equipped.

The connections are made as follows:

1. Remove gasoline engine complete from grader.
2. Attach sections of 3/4-inch pipe along grader frame extending from the point opposite the hydraulic control box to the front end of the grader frame. Connect this pipe to the control box with high pressure hydraulic hose allowing sufficient slack for vibration and twisting of grader.
3. Attach sections of 3/4-inch pipe to grader tongue to within a foot or two of the front end. Connect rear end of this pipe to the pipe on grader frame with high pressure hydraulic hose of sufficient length to permit hose to be slack in all positions of the grader tongue. Make similar connections from front end of pipe on tongue to pump and tank on tractor.

The estimated cost for making this conversion is:

Parts and materials.....	\$12.50
Labor at \$1.20 per hour.....	<u>36.00</u>
Total.....	\$48.50

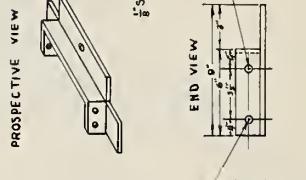
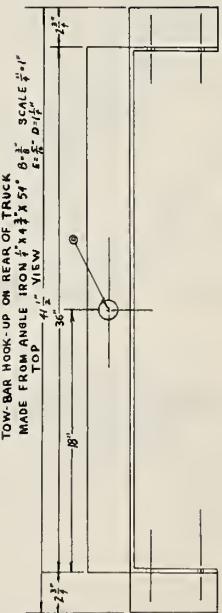
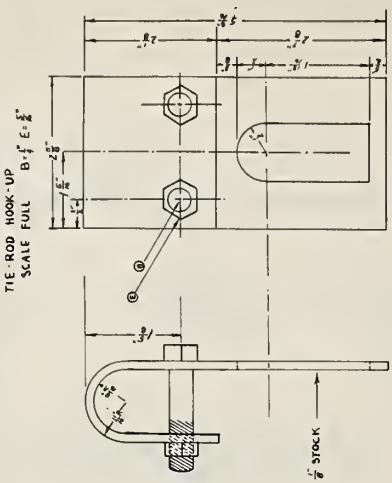
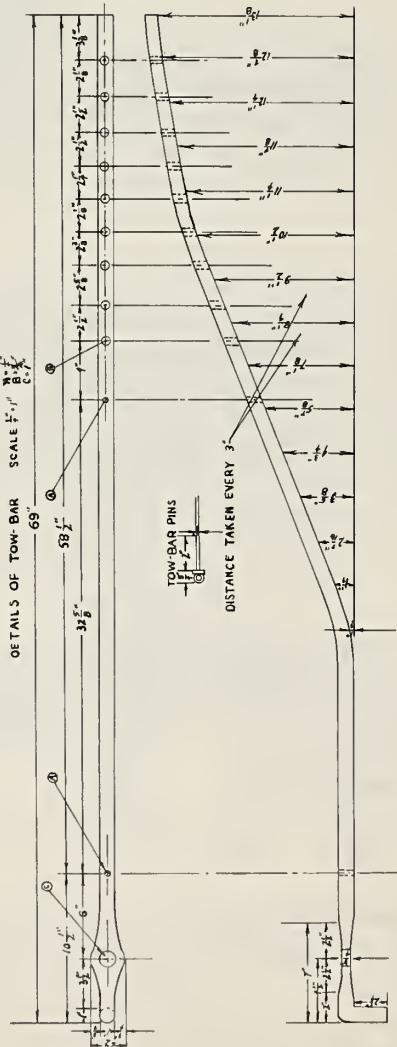
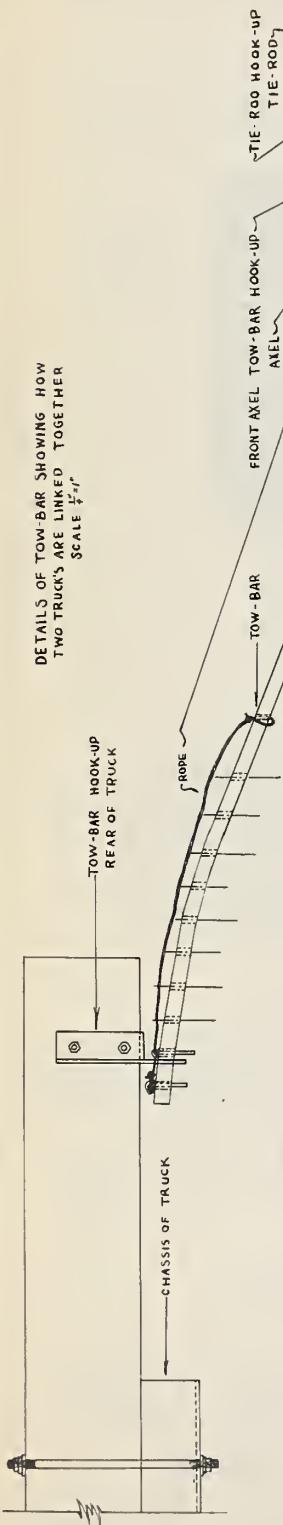


Note:

Tank & Pump are connected with high pressure hose so that one hose remains on each when disconnected from grader, thereby letting pump run in oil.

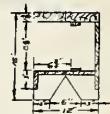
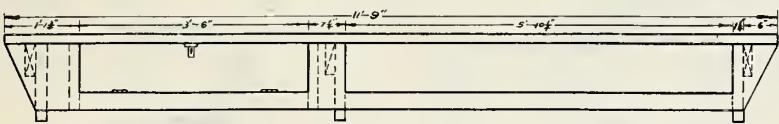
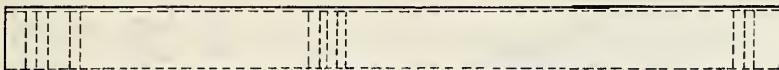
**SKETCH OF HYDRAULIC PUMP FROM DUMP TRUCK ATTACHED TO CAT. 50 TRACTOR USED TO OPERATE HYDRAULIC GRAIDER**

DETAILS OF TOW-BAR SHOWING HOW  
TWO TRUCK'S ARE LINKED TOGETHER  
SCALE  $\frac{1}{4}$ " = 1'

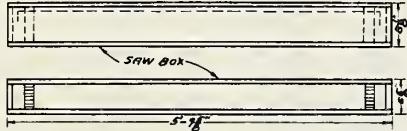


WORK TRUCK ACCESSORIES  
DESIGNED BY MURRAY MINAHLIC PROJECT MANAGER  
C. A. HARTZ PROJECT SUPERINTENDENT  
DRAWN BY STEPHEN WILLIAMS CO. 301 C.C.  
7-27-38

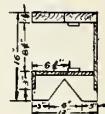
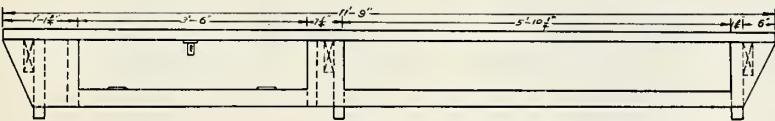
ELEVATION OF TRUCK BENCH WITH TOOL COMPARTMENTS



CROSS SECTION



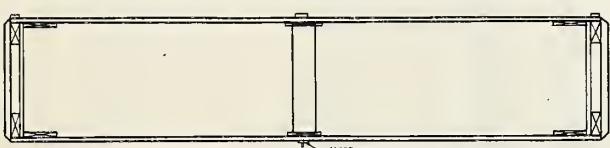
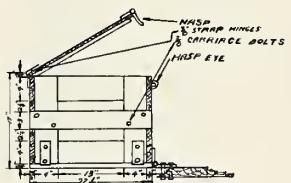
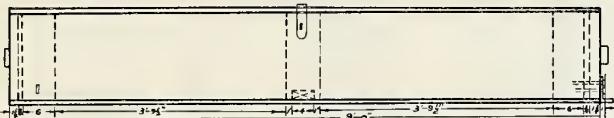
ELEVATION OF TRUCK BENCH WITH TOOL COMPARTMENTS



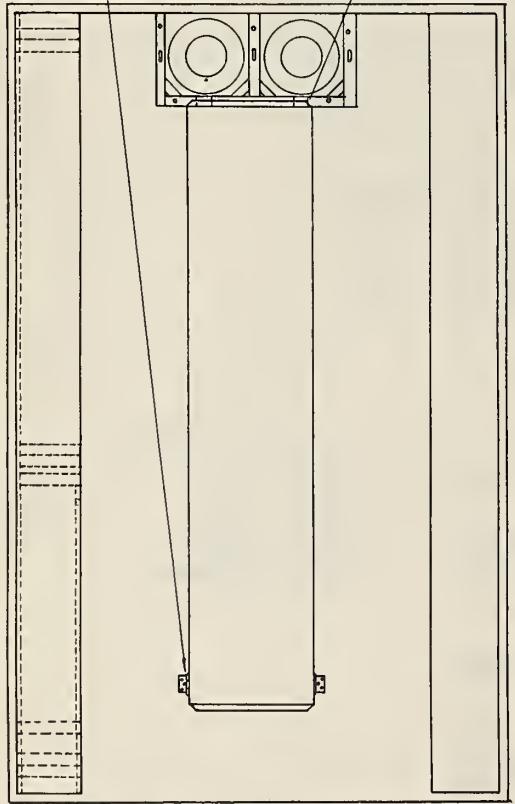
CROSS SECTION



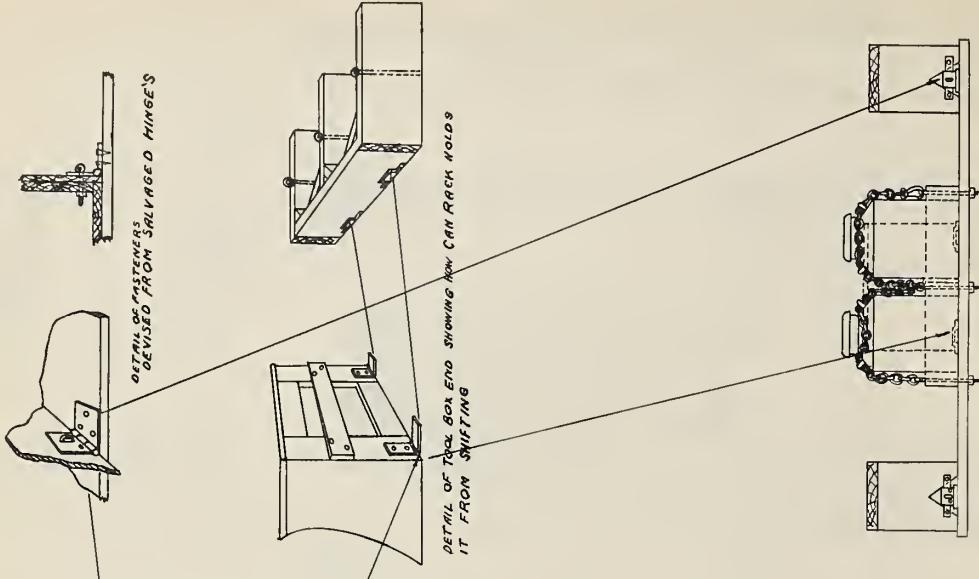
TRUCK TOOL BOXES



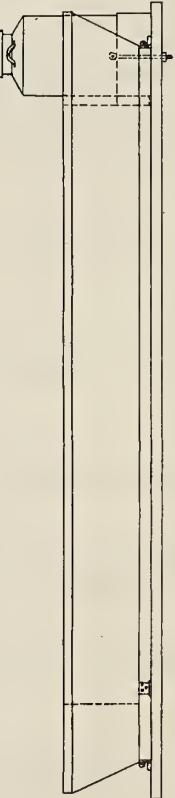
WORK TRUCK ACCESSORIES
PERIODICAL COUN LIEPHART & DON VLAHOV - FRANZ CO. INC. CITY EVELYN P. BOCHKO WENTHORPE, MICHIGAN HIAWATHA NAT'L FOREST
C.R. HARTZ, PROJECT SUPERINTENDENT DRAWN BY COUN LIEPART FRANZ C.E.M. TRACED BY GUY SOLSICK ROOM 103613 CSC. 5/4/39



FLOOR PLAN OF BENCH, TOOL BOX, & CAN ARRANGEMENT ON TRUCK BED



END ELEVATION



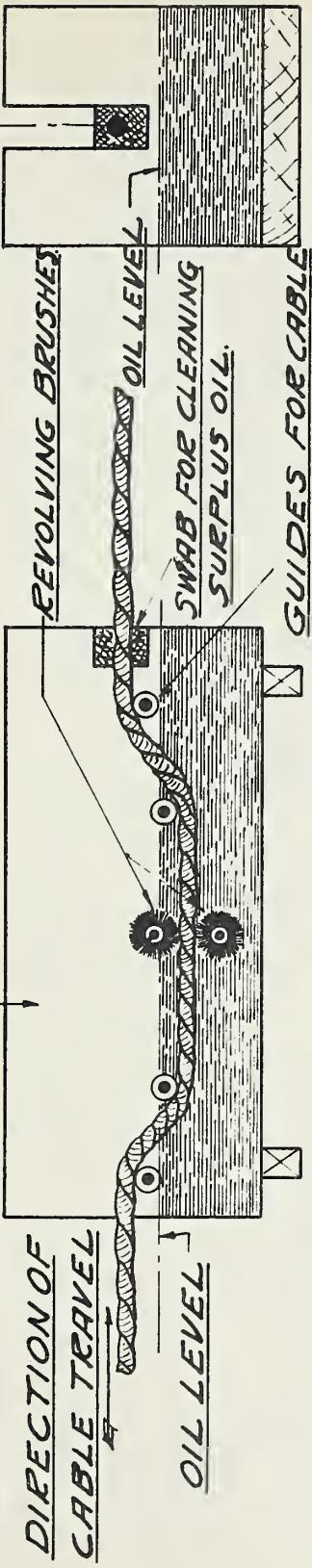
SIDE ELEVATION OF ARRANGEMENT ON TRUCK BED

WORK TRUCK ACCESSORIES  
DESIGNED BY  
DON LIPMAN & DON VANDERARTH, C.E.  
CAMP LEVEL 1, P.O. (TOMMY HENRY)  
HAWAIIAN NAT'L FOREST  
CAMP 2 PRIVATE SUPERINTENDENT  
DRIVEN BY GREEN SOLES (LEADERFRIC 300)  
APRIL 1963

METAL TANK CONTAINING STANDARD  
CABLE LUBRICANT

DIRECTION OF  
CABLE TRAVEL

OIL LEVEL



SECTIONAL VIEW

END VIEW

U. S. FOREST SERVICE, REGION 6  
MECHANICAL IMPROVEMENTS & REPAIRS  
METHOD OF LUBRICATING  
WIRE ROPE  
SUBMITTED BY GEORGE B. HALL  
FOREST REGION 6  
PORTLAND, ORE. SKETCH NO. 52  
DATE 5-2-38

## PROPOSED NEW WIRE REEL

This reel has particular adaptability in reeling rolls of wire in telephone line construction and in reeling wire of any other type.

The spool has a capacity of one standard roll of telephone wire, handling approximately one to one and one half miles of No. 12 wire. It is particularly useful in reeling barbed wire into rolls that are convenient to handle providing the roll is bound prior to separation from reel, which is accomplished by the loosening of three of the arm set bolts on the reel arms.

The frame which is bolted to 2" x 4" wooden bases, preferably oak, is composed of two lengths of 3-8" x 1 $\frac{1}{2}$ " wrought flat iron shaped as shown in the drawing and stiffened by diagonal iron of the same size. The reel proper is constructed of like material, the ends of the arms of the "U" shaped cradles being flattened to facilitate the piloting of the wire being reeled;  $\frac{1}{2}$ " bolts make the cradles adjustable in removing rolls of wire already reeled. It is necessary only to give the movable sections one-half turn toward the center of the reel to remove the wire rolls upon completion of reeling.

An end wrench to fit the bolts above mentioned is recommended as an integral part of the apparatus.

